






**Conformance Test Report
for EN301 406 v1.5.1 (2003-07)
Digital Enhanced Cordless Telecommunic. (DECT);
Harmonized EN for Digital Enhanced Cordless
Telecommunications(DECT) covering essential
requirements under article 3.2 of R&TTE Directive;
Generic radio**

Report No.: ET93B-08-028

| | |
|------------------------------|--|
| Client: | SunCorp Communications Ltd. |
| Product: | DECT phone |
| System Under Test (SUT): | DECT17-3-S11 (FP) |
| Manufacturer | Shenzhen Top Guo Wei Electronics Co., Ltd. |
| Date test item received: | 2004/08/10 |
| Date test campaign completed | 2004/08/20 |
| Date of issue: | 2004/08/21 |

*The test report include test result of conformance log layer 1.
Total number of pages of this test report: 27 pages*

The test result only corresponds to the tested sample. It is not permitted to copy this report, in part or in full, without the permission of the test laboratory.

| | | |
|---|---|---|
| Tested by | Checked by | Approved by |
|  |  |  |
| Alex Chen | David Song | Victor Kwan |

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1.1 Reason for measurements and identification of the protocol

The Test Candidate shall be tested to

DECT, General terminal attachment requirements

| | |
|-------------------|------------------|
| EN 301 406 | V1.5.1 (2003-07) |
| EN 300 175-2, PHL | July 2003 |
| | |
| | |
| | |

1.1.1 Global statement of conformance

| | |
|--|------------|
| Has the applicant filled out the Client Test Preparation Information in accordance to EN301 406 | Yes |
|--|------------|

see annex EN301 406 Statement of the applicant“

1.2 Identification and functional description of the test candidate

1.2.1 Client identification

| | |
|----------------|--|
| Name | SunCorp Communications Ltd. |
| Contact person | C.W. Cheung |
| Address | Room 1907-08, Harcourt House, 39 Gloucester Road, Wanchai, Hong Kong |
| Phone No. | +866 755 2573 6666 |
| Fax No. | +866 755 2573 2288 |

1.2.2 Identification of the Test Candidate:

| | |
|--|----------------------|
| RFPI of the FP with int. antenna | - - |
| RFPI of the FP with temp. ant. con. | 1122330100 |
| Hardware version | - - |
| Software version | - - |
| Operating voltage nom/min/max | 230VAC/207VAC/253VAC |
| Serial No of the FP with int. antenna. | - - |
| Serial No of the FP with temp. ant. con. | - - |

1.2.3 Functional description

The Test Candidate is a fixed part with integrated antennas of a cordless telephone system for 3.1 kHz voice-communications on **DECT-standard**. For the integrated antennas a diversity-switch is included to the equipment. This fixed part(FP)is used in combination with a portable part (PP) for connections to the analogue public switched telephone network

For the tests one sample with integrated antenna and one sample with 50 Ω -connector were available to the test lab.

1.3 Climatic Conditions

| | | |
|---------------------|-----------------|----------------------|
| Temperature °C | Rel. Humidity % | Atmospheric Pressure |
| nominal value | | |
| aimed +15°C - +35°C | aimed 20% - 75% | aimed 86 - 106 kPa |

The requirements for temperature, rel. humidity and atmospheric pressure were observed and be within the specified range.

1.4 Measurement accuracy

The measurement accuracy is in accordance with EN301 406 V1.5.1 (2003-07).

Note: All values reflect a confidence level of 95 %.

The actual measurement uncertainties are described at each test.

1.5 Test equipment used

| Equipment | Inventory-No.: |
|---|---------------------------------|
| R&S DECT Type approval system TS 8930 FTAS: | |
| Process Controller | H1882000176 |
| R&S Signalling unit TS1220 | - |
| RF-Generator | H1882000179 |
| RF-Generator | H1882000187 |
| Spectrum- Analyzer | H1882000186 |
| Switch Matrix | H1882000185 |
| RF-Generator | H1882000162 |
| Software | DOS-Version 3.02F from 19.02.99 |
| Anechoic Chamber V | |
| Spectrum- Analyzer | H1882000161 |
| RF-Pre-Amplifier | H1882000169 |
| RF-Pre-Amplifier | H1882000170 |
| RF-Filter | H1882000189 |
| RF-Filter | H1882000190 |
| RF-Antenna | H1882000145 |
| RF-Antenna | H1882000146 |
| RF-Antenna | H1882001604 |
| RF-Antenna | H1882001605 |
| Control-PC | H1882000140 |
| Software T_Case_12 | V 3.1 from 19.07.99 |

1.6 Explanation of the results abbreviations

P = pass, inside of the specification

P* = pass, inside of the specification in consideration of the test accuracy

F = failed, exceeding the specification

O = not implicated

- = not tested

? = no clear result considering to the specification

* = see note

1.7 Comments for testing

Delivery date of Test Candidate: . 2004.08.10
The tests were done from 2004.08.10 at 2004.08.20

Electronics Testing Center ,Taiwan

No.8, Lane 29, Wen-Ming Road Lo-ShanTsun Kui-Shan Hsiang
Taoyuan Hsien 333, Taiwan R.O.C.

During the tests were present:

Mr. Alex Chen from **ETC**

Mr.Victor Kwan from **TÜV Product Service Asia Ltd.**

Mr. C.W. Cheung from **SunCorp Communications Ltd.**

The test set-up and tests are according to EN301 406 V1.5.1(2003-07) and **DTAAB DT.04 V10 from 11/99** and the internal test comments of the test lab.

All measurements, in exception of parts of Testcase 6 and Testcase 12, were done at the equipment with 50 Ω -temporary antenna connector.

All radiated measurements were done in the anechoic chamber

The test site and the whole test equipment is according to standards
EN301 406 V1.5.1 (2003-07).

2 IUT conformance status according to EN301 406 V1.5.1(2003-07)

2.1 IUT conformance summary

The IUT **has not been** shown by conformance assessment to be non conforming to the general terminal attachment requirements, EN301 406

2.2 EN301 406 results overview

| Test case | Point | Testcase description | Remarks | Sel. | Run | Verdict |
|-----------|-----------|--|---|------|-----|---------|
| 1 | 4.5.1 | Accuracy and stability of RF carriers | | Y | Y | Pass |
| 2 | 4.5.2 | Timing jitter: slot - slot on the same channel | | Y | Y | Pass |
| 3 | | Reference timing accuracy of a RFP | | Y | Y | Pass |
| 4 | | Measurement of packet timing accuracy | only for portable part | N | N | ---- |
| 5 | 4.5.3 | Transmission burst | | Y | Y | Pass |
| 6 | 4.5.4.1.1 | Transmitted power (with an internal antenna) NTP | | Y | Y | Pass |
| 7 | 4.5.4.1.2 | Transmitted power (with an external antenna connector) | | N | N | --- |
| 8 | 4.5.5 | RF carrier modulation | | Y | Y | Pass |
| 9 | 4.5.6.2 | Emissions due to modulation | | Y | Y | Pass |
| 10 | 4.5.6.3 | Emissions due to transmitter transients | | Y | Y | Pass |
| 11 | 4.5.6.4 | Emissions due to intermodulation | only for basestation with more than one transmitter | N | N | --- |
| 12 | 4.5.6.5 | Spurious emissions when allocated a transmit channel | Conducted spurious | Y | Y | Pass |
| | | | Radiated spurious | | | Pass |
| 13 | 4.5.7.1 | Radio receiver sensitivity | | Y | Y | Pass |
| 14 | 4.5.7.2 | Radio receiver reference bit error ratio | | Y | Y | Pass |
| 15 | 4.5.7.3 | Radio receiver interference performance | | Y | Y | Pass |
| 16 | 4.5.7.4 | Radio receiver blocking case 1 | | Y | Y | Pass |
| 17 | 4.5.7.5 | Radio receiver blocking case 2 | | Y | Y | Pass |
| 18 | 4.5.7.6 | Receiver intermodulation performance | | Y | Y | Pass |
| 19 | 4.5.7.7 | Spurious emissions when the radio endpoint has no allocated transmit channel | only for portable part | N | N | --- |

EN301 406 V1.5.1(2003-07) results overview

| Test case | Point | Testcase description | Remarks | Sel. | Verdict |
|-----------|--------|---|---------|------|---------------------------------|
| 20 | 4.5.8 | Synchronisation port | | N | No test |
| 21 | 4.5.9 | Equipment identity verification /safeguards | | N | Manufacturer declaration |
| 22 | 4.5.10 | Efficient use of radio spectrum | | N | Manufacturer declaration |
| 23 | 4.5.11 | WRS | | N | No test |
| 24 | 4.5.12 | PP to PP communication | | N | No test |
| 25 | 4.5.13 | Direct communication | | N | No test |
| 26 | 4.5.14 | Higher level modulation | | N | No test |

2.3 Test campaign report

2.3.1 TC 1 Accuracy and stability of RF carriers (4.5.1)

aimed for $t \geq 1$ s with $\Delta f \leq \pm 50$ kHz under nominal and extreme conditions

| | Deviation [kHz] | | |
|-----------------------------------|-----------------|-----------|-----------|
| | channel 0 | channel 5 | Channel 9 |
| nom. temperature and nom. Voltage | 3.57 | 4.56 | 3.49 |
| +10°C and minimum voltage | 5.53 | 6.64 | 6.87 |
| +10°C and maximum voltage | 1.04 | 6.04 | 7.37 |
| +40°C and minimum voltage | 3.32 | 3.15 | 6.57 |
| +40°C and maximum voltage | 2.34 | 8.58 | 8.19 |

Measurement uncertainty: < 1%

Comment: minimum voltage = 207V

P
P
P
P
P

2.3.2 TC 2 Timing jitter: slot- slot on the same channel (4.5.2)

| Test in channel 5 aimed $< \pm 1$ μ s | Deviation [μ s] | |
|--|----------------------|----------|
| | positive | Negative |
| nom. temperature and nom. Voltage | 0.046 | -0.084 |
| +10°C and minimum voltage | 0.030 | -0.093 |
| +10°C and maximum voltage | 0.027 | -0.091 |
| +40°C and minimum voltage | 0.045 | -0.081 |
| +40°C and maximum voltage | 0.049 | -0.087 |

Measurement uncertainty: ≤ 77.4 ns

Comment: minimum voltage = 207V

P
P
P
P
P

2.3.3 TC 3 Reference timing accuracy of a RFP

| Test in channel 5 | Aimed | Deviation [ppm] |
|-----------------------------------|----------|-----------------|
| nom. temperature and nom. Voltage | < 5 ppm | -1.85 |
| +10°C and minimum voltage | < 10 ppm | -2.90 |
| +10°C and maximum voltage | < 10 ppm | -2.98 |
| +40°C and minimum voltage | < 10 ppm | -1.51 |
| +40°C and maximum voltage | < 10 ppm | -1.38 |

Measurement uncertainty: ≤ 77.4 ns

Comment: minimum voltage = 207V

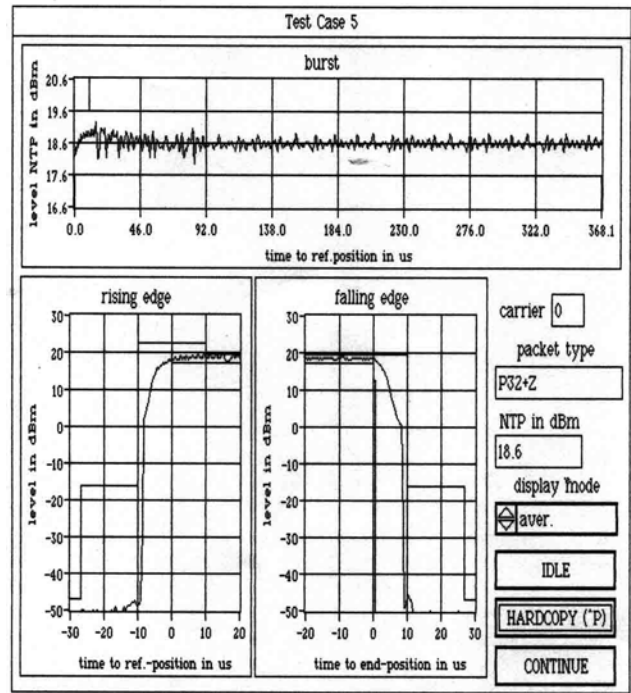
P
P
P
P
P

2.3.4 TC 4 Measurement of packet timing accuracy

only recommended for portable parts

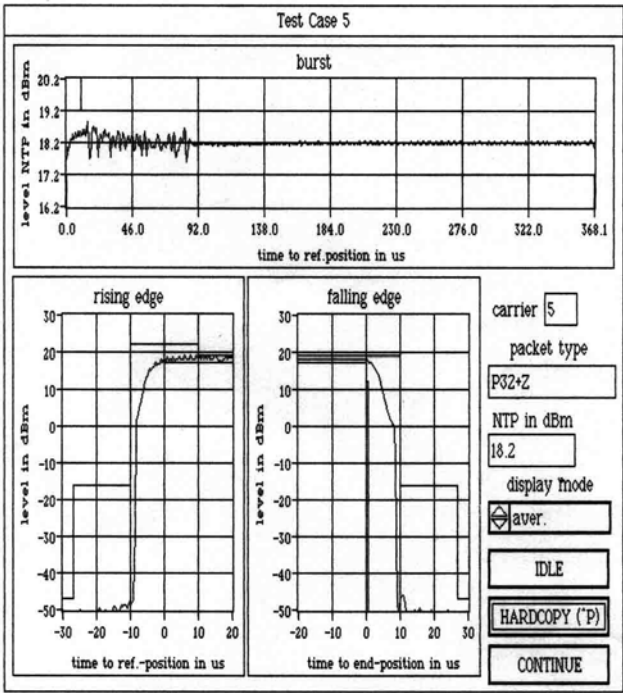
2.3.5 TC 5 Transmission Burst (4.5.3)

Measurement uncertainty: + 0.85 dB / -0.92 dB



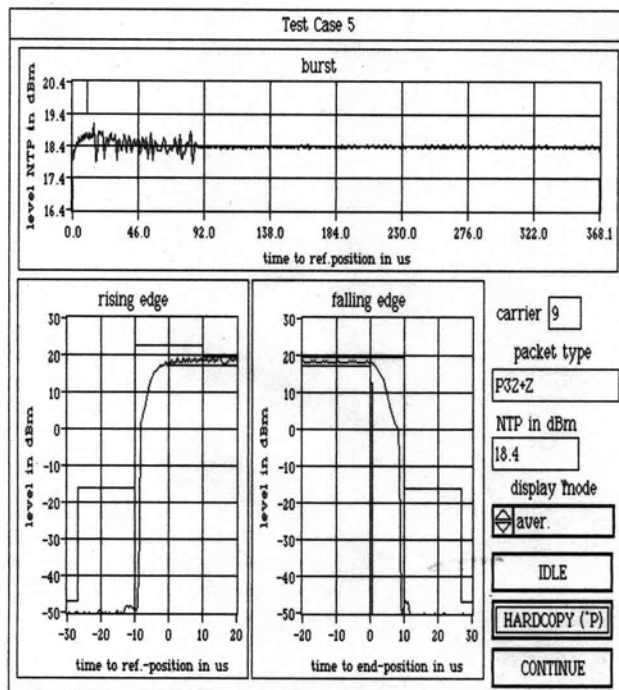
Nom. temperature and nom. Voltage

P



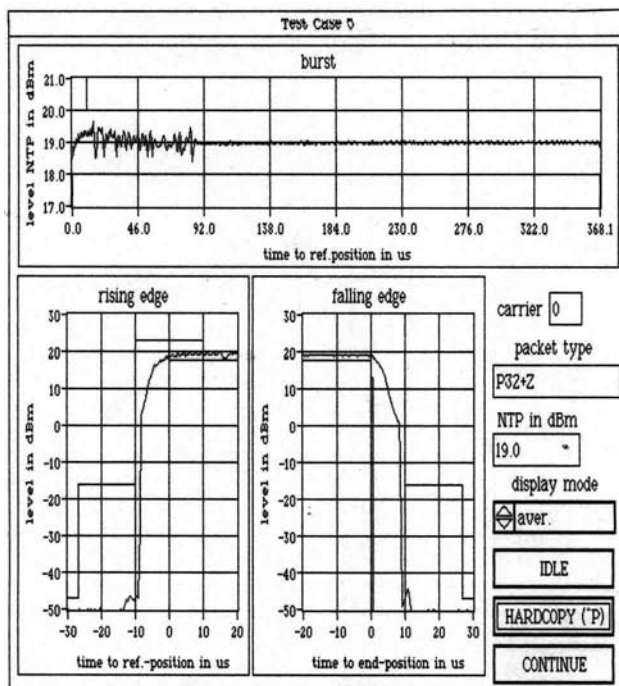
P

Nom. temperature and nom. voltage



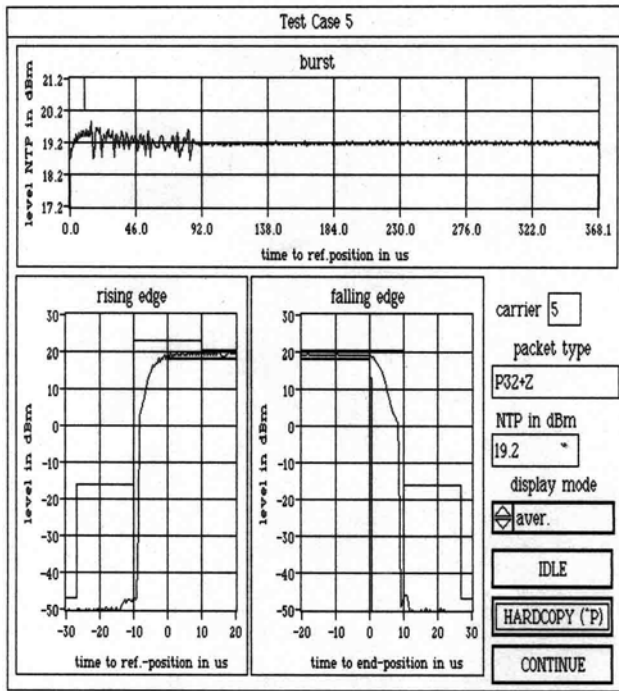
Nom. temperature and nom. voltage

P



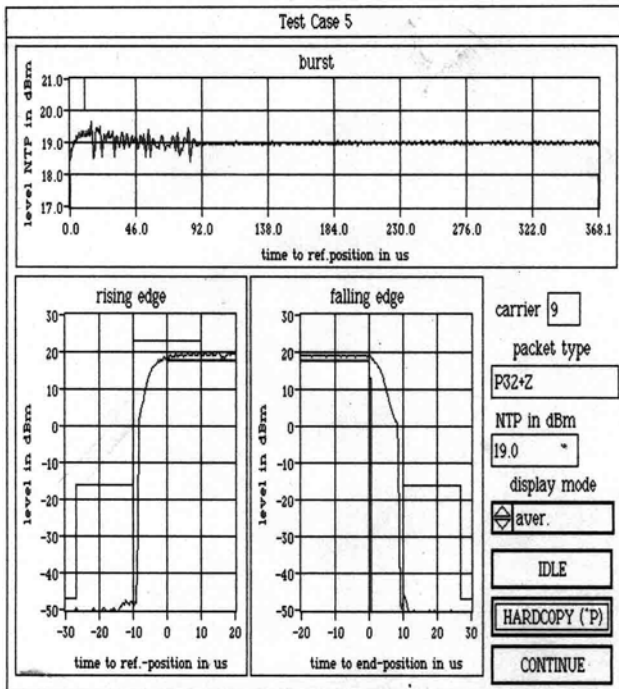
+10°C temperature and nom. Voltage

P



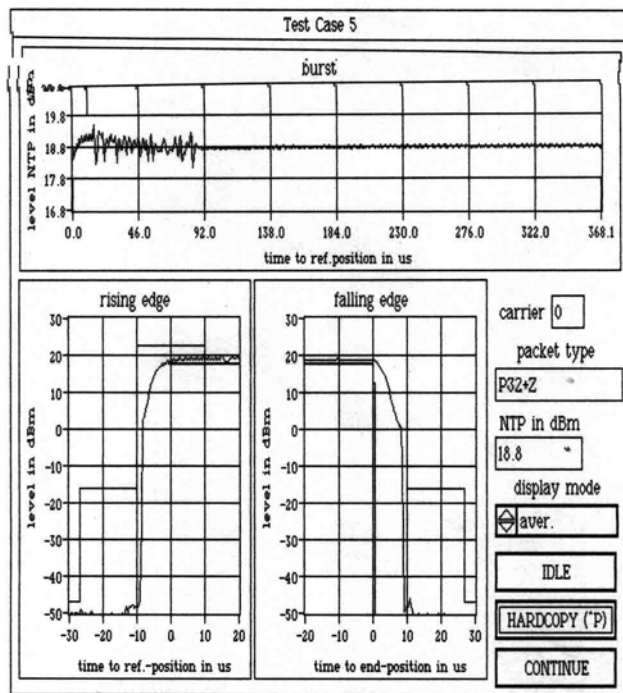
+10°C temperature and nom. voltage

P



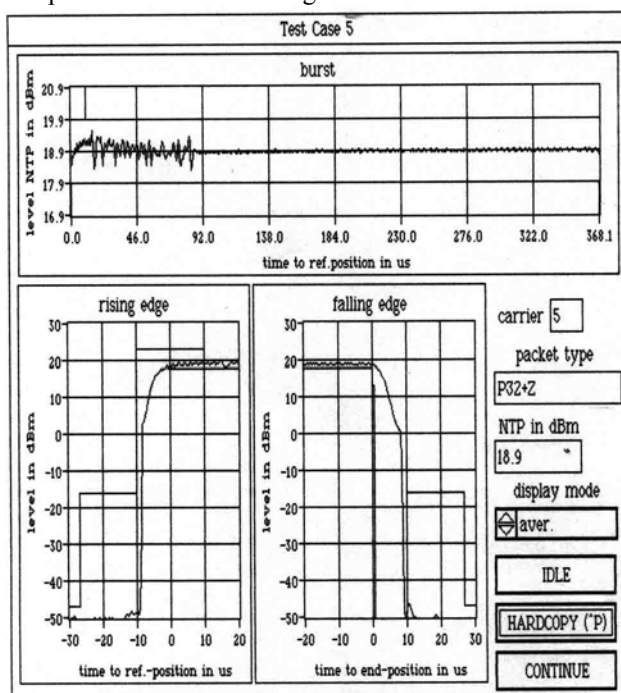
+10°C temperature and nom. voltage

P



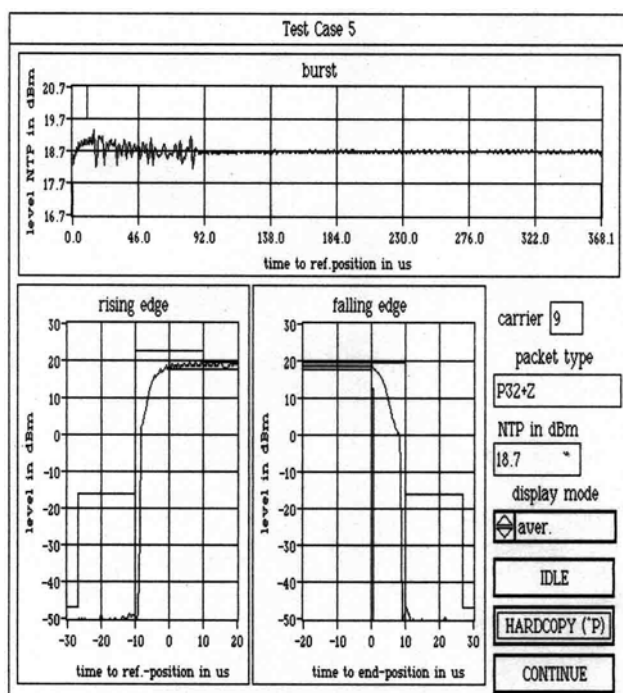
+40°C temperature and nom. voltage

P



+40°C temperature and nom. voltage

P



+40°C temperature and nom. voltage

P

2.3.6 TC 6 Transmitted power: PP and FP with internal antenna (4.5.4.1.1)

Conducted RF-output power in the Burst: aimed ≤ 250 mW (24 dBm)
 Height of receive antenna actual = **1.50 m**
 Radiated field strength maximum at position in degrees ant. 0 actual = **10°** hor
 ant. 1 actual = **230°** ver
 Antenna gain: aimed with max. 12 dB

| Antenna 0 | conducted Power | radiated Power | Antenna gain |
|-----------|-----------------|----------------|--------------|
| Channel 0 | 18.90 dBm | 19.66dBm | -0.76 dB |
| Channel 5 | 18.30 dBm | 19.58dBm | -1.28 dB |
| Channel 9 | 18.60 dBm | 19.39dBm | -0.79 dB |

P

Measurement uncertainty radiated: + 3.53 dB / -3.53 dB
 Measurement uncertainty conducted: + 0.85 dB / -0.92 dB

2.3.7 TC 7 Transmitted power: FP with an external ant. connector (4.5.4.1.2)

not applicable

2.3.8

TC 8 RF-carrier modulation (4.5.5)

part 1: aimed $> \pm 259 \text{ kHz} < \pm 403 \text{ kHz}$

part 2-3: aimed $> \pm 202 \text{ kHz} < \pm 403 \text{ kHz}$

part 4: aimed $< \pm 15 \text{ kHz/slot}$

Measurement uncertainty part 1-3: $\pm 10 \text{ kHz}$

part 4: $\pm 2 \text{ kHz}$

TRAFFIC SLOT: 0

TRAFFIC CARRIER: 5

PACKET TYPE: P32+Z

part1: 10 bursts evaluated

maximum positive modulation: 328.68 kHz

maximum negative modulation: -313.33 kHz

part2: 10 bursts evaluated

maximum positive modulation: 326.61 kHz

maximum negative modulation: -305.73 kHz

part3: 10 bursts evaluated

maximum positive modulation: 308.45 kHz

maximum negative modulation: -300.88 kHz

part4: 200 bursts evaluated

averaged frequency drift: -2.58 kHz/slot

P

P

P

P

P

P

P

2.3.9

TC 9 Emissions due to modulation (4.5.6.2)

Measurement uncertainty: $+ 0.49 \text{ dB} / -0.51 \text{ dB}$

One exception $< -33 \text{ dBm}$ (500 nW) permissible

TRAFFIC SLOT: 6

TRAFFIC CARRIER: 0

PACKET TYPE: P32+Z

measured NTP: 19.00 dBm

| | | measured values | limits | |
|------------|------------------|-----------------|---------|---|
| CARRIER 0: | integrated power | 19.00 dBm | --- | P |
| CARRIER 1: | integrated power | -21.58 dBm | -8 dBm | P |
| CARRIER 2: | integrated power | -31.00 dBm | -30 dBm | P |
| CARRIER 3: | integrated power | -41.06 dBm | -41 dBm | P |
| CARRIER 4: | integrated power | -44.29 dBm | -44 dBm | P |
| CARRIER 5: | integrated power | -44.43 dBm | -44 dBm | P |
| CARRIER 6: | integrated power | -44.85 dBm | -44 dBm | P |
| CARRIER 7: | integrated power | -46.01 dBm | -44 dBm | P |
| CARRIER 8: | integrated power | -46.56 dBm | -44 dBm | P |
| CARRIER 9: | integrated power | -47.40 dBm | -44 dBm | P |

TRAFFIC SLOT: 0
 TRAFFIC CARRIER: 5
 PACKET TYPE: P32+Z
 measured NTP: 18.20 dBm

| | | measured values | limits | |
|------------|------------------|-----------------|---------|---|
| CARRIER 0: | integrated power | -45.44 dBm | -44 dBm | P |
| CARRIER 1: | integrated power | -44.57 dBm | -44 dBm | P |
| CARRIER 2: | integrated power | -42.34 dBm | -41 dBm | P |
| CARRIER 3: | integrated power | -34.19 dBm | -30 dBm | P |
| CARRIER 4: | integrated power | -16.59 dBm | -8 dBm | P |
| CARRIER 5: | integrated power | 18.20 dBm | --- | P |
| CARRIER 6: | integrated power | -22.35 dBm | -8 dBm | P |
| CARRIER 7: | integrated power | -32.66 dBm | -30 dBm | P |
| CARRIER 8: | integrated power | -42.84 dBm | -41 dBm | P |
| CARRIER 9: | integrated power | -44.11 dBm | -44 dBm | P |

TRAFFIC SLOT: 8
 TRAFFIC CARRIER: 9
 PACKET TYPE: P32+Z
 measured NTP: 18.40 dBm

| | | measured values | limits | |
|------------|------------------|-----------------|---------|---|
| CARRIER 0: | integrated power | -49.48 dBm | -44 dBm | P |
| CARRIER 1: | integrated power | -48.65 dBm | -44 dBm | P |
| CARRIER 2: | integrated power | -48.18 dBm | -44 dBm | P |
| CARRIER 3: | integrated power | -47.23 dBm | -44 dBm | P |
| CARRIER 4: | integrated power | -45.97 dBm | -44 dBm | P |
| CARRIER 5: | integrated power | -44.87 dBm | -44 dBm | P |
| CARRIER 6: | integrated power | -42.60 dBm | -41 dBm | P |
| CARRIER 7: | integrated power | -34.45 dBm | -30 dBm | P |
| CARRIER 8: | integrated power | -16.52 dBm | -8 dBm | P |
| CARRIER 9: | integrated power | 18.40 dBm | --- | P |

2.3.10 TC 10 Emissions due to transmitter transients (4.5.6.3)

Measurement uncertainty: +0.49 dB / -0.51 dB

TRAFFIC SLOT: 6
 TRAFFIC CARRIER: 0
 PACKET TYPE: P32+Z

| | | measured values | limits | |
|------------|------------|------------------------|---------|---|
| CARRIER 0: | max. power | 73.94 mW (18.69 dBm) | --- | P |
| CARRIER 1: | max. power | 29.01 uW (-15.37 dBm) | -6 dBm | P |
| CARRIER 2: | max. power | 1.38 uW (-28.60 dBm) | -14 dBm | P |
| CARRIER 3: | max. power | 253.03 nW (-35.97 dBm) | -24 dBm | P |
| CARRIER 4: | max. power | 83.31 nW (-40.79 dBm) | -30 dBm | P |
| CARRIER 5: | max. power | 44.83 nW (-43.48 dBm) | -30 dBm | P |
| CARRIER 6: | max. power | 36.96 nW (-44.32 dBm) | -30 dBm | P |
| CARRIER 7: | max. power | 23.98 nW (-46.20 dBm) | -30 dBm | P |
| CARRIER 8: | max. power | 25.27 nW (-45.97 dBm) | -30 dBm | P |
| CARRIER 9: | max. power | 17.80 nW (-47.50 dBm) | -30 dBm | P |

| | | | | | | | | |
|------------------|------------|-----------------|--------------|---------|--|--------|---|--|
| TRAFFIC SLOT: | 8 | | | | | | | |
| TRAFFIC CARRIER: | 1 | | | | | | | |
| PACKET TYPE: | P32+Z | | | | | | | |
| | | measured values | | | | limits | | |
| CARRIER 0: | max. power | 72.66 uW | (-11.39 dBm) | -6 dBm | | | P | |
| CARRIER 1: | max. power | 73.51 mW | (18.66 dBm) | --- | | | P | |
| CARRIER 2: | max. power | 31.12 uW | (-15.07 dBm) | -6 dBm | | | P | |
| CARRIER 3: | max. power | 954.14 nW | (-30.20 dBm) | -14 dBm | | | P | |
| CARRIER 4: | max. power | 259.02 nW | (-35.87 dBm) | -24 dBm | | | P | |
| CARRIER 5: | max. power | 74.55 nW | (-41.28 dBm) | -30 dBm | | | P | |
| CARRIER 6: | max. power | 50.68 nW | (-42.95 dBm) | -30 dBm | | | P | |
| CARRIER 7: | max. power | 29.94 nW | (-45.24 dBm) | -30 dBm | | | P | |
| CARRIER 8: | max. power | 22.88 nW | (-46.40 dBm) | -30 dBm | | | P | |
| CARRIER 9: | max. power | 25.57 nW | (-45.92 dBm) | -30 dBm | | | P | |
| TRAFFIC SLOT: | 10 | | | | | | | |
| TRAFFIC CARRIER: | 2 | | | | | | | |
| PACKET TYPE: | P32+Z | | | | | | | |
| | | measured values | | | | limits | | |
| CARRIER 0: | max. power | 1.05 uW | (-29.77 dBm) | -14 dBm | | | P | |
| CARRIER 1: | max. power | 69.34 uW | (-11.59 dBm) | -6 dBm | | | P | |
| CARRIER 2: | max. power | 78.40 mW | (18.94 dBm) | --- | | | P | |
| CARRIER 3: | max. power | 31.67 uW | (-14.99 dBm) | -6 dBm | | | P | |
| CARRIER 4: | max. power | 988.21 nW | (-30.05 dBm) | -14 dBm | | | P | |
| CARRIER 5: | max. power | 271.43 nW | (-35.66 dBm) | -24 dBm | | | P | |
| CARRIER 6: | max. power | 86.29 nW | (-40.64 dBm) | -30 dBm | | | P | |
| CARRIER 7: | max. power | 40.82 nW | (-43.89 dBm) | -30 dBm | | | P | |
| CARRIER 8: | max. power | 30.12 nW | (-45.21 dBm) | -30 dBm | | | P | |
| CARRIER 9: | max. power | 26.48 nW | (-45.77 dBm) | -30 dBm | | | P | |
| TRAFFIC SLOT: | 0 | | | | | | | |
| TRAFFIC CARRIER: | 3 | | | | | | | |
| PACKET TYPE: | P32+Z | | | | | | | |
| | | measured values | | | | limits | | |
| CARRIER 0: | max. power | 195.64 nW | (-37.09 dBm) | -24 dBm | | | P | |
| CARRIER 1: | max. power | 755.16 nW | (-31.22 dBm) | -14 dBm | | | P | |
| CARRIER 2: | max. power | 56.51 uW | (-12.48 dBm) | -6 dBm | | | P | |
| CARRIER 3: | max. power | 76.14 mW | (18.82 dBm) | --- | | | P | |
| CARRIER 4: | max. power | 30.76 uW | (-15.12 dBm) | -6 dBm | | | P | |
| CARRIER 5: | max. power | 971.03 nW | (-30.13 dBm) | -14 dBm | | | P | |
| CARRIER 6: | max. power | 235.89 nW | (-36.27 dBm) | -24 dBm | | | P | |
| CARRIER 7: | max. power | 65.17 nW | (-41.86 dBm) | -30 dBm | | | P | |
| CARRIER 8: | max. power | 43.53 nW | (-43.61 dBm) | -30 dBm | | | P | |
| CARRIER 9: | max. power | 29.77 nW | (-45.26 dBm) | -30 dBm | | | P | |
| TRAFFIC SLOT: | 8 | | | | | | | |
| TRAFFIC CARRIER: | 4 | | | | | | | |
| PACKET TYPE: | P32+Z | | | | | | | |
| | | measured values | | | | limits | | |
| CARRIER 0: | max. power | 69.91 nW | (-41.55 dBm) | -30 dBm | | | P | |
| CARRIER 1: | max. power | 188.89 nW | (-37.24 dBm) | -24 dBm | | | P | |
| CARRIER 2: | max. power | 905.23 nW | (-30.43 dBm) | -14 dBm | | | P | |
| CARRIER 3: | max. power | 81.67 uW | (-10.88 dBm) | -6 dBm | | | P | |
| CARRIER 4: | max. power | 77.03 mW | (18.87 dBm) | --- | | | P | |
| CARRIER 5: | max. power | 33.98 uW | (-14.69 dBm) | -6 dBm | | | P | |
| CARRIER 6: | max. power | 791.32 nW | (-31.02 dBm) | -14 dBm | | | P | |
| CARRIER 7: | max. power | 226.43 nW | (-36.45 dBm) | -24 dBm | | | P | |
| CARRIER 8: | max. power | 80.91 nW | (-40.92 dBm) | -30 dBm | | | P | |
| CARRIER 9: | max. power | 36.96 nW | (-44.32 dBm) | -30 dBm | | | P | |

| | | | | | | | | | |
|------------------|------------|-----------------|--------------|--|---------|--------|--|---|--|
| TRAFFIC SLOT: | 0 | | | | | | | | |
| TRAFFIC CARRIER: | 5 | | | | | | | | |
| PACKET TYPE: | P32+Z | | | | | | | | |
| | | measured values | | | | limits | | | |
| CARRIER 0: | max. power | 36.32 nW | (-44.40 dBm) | | -30 dBm | | | P | |
| CARRIER 1: | max. power | 53.73 nW | (-42.70 dBm) | | -30 dBm | | | P | |
| CARRIER 2: | max. power | 188.89 nW | (-37.24 dBm) | | -24 dBm | | | P | |
| CARRIER 3: | max. power | 573.71 nW | (-32.41 dBm) | | -14 dBm | | | P | |
| CARRIER 4: | max. power | 63.51 uW | (-11.97 dBm) | | -6 dBm | | | P | |
| CARRIER 5: | max. power | 70.98 mW | (18.51 dBm) | | --- | | | P | |
| CARRIER 6: | max. power | 26.89 uW | (-15.70 dBm) | | -6 dBm | | | P | |
| CARRIER 7: | max. power | 664.01 nW | (-31.78 dBm) | | -14 dBm | | | P | |
| CARRIER 8: | max. power | 182.38 nW | (-37.39 dBm) | | -24 dBm | | | P | |
| CARRIER 9: | max. power | 63.66 nW | (-41.96 dBm) | | -30 dBm | | | P | |
| TRAFFIC SLOT: | 4 | | | | | | | | |
| TRAFFIC CARRIER: | 6 | | | | | | | | |
| PACKET TYPE: | P32+Z | | | | | | | | |
| | | measured values | | | | limits | | | |
| CARRIER 0: | max. power | 23.84 nW | (-46.23 dBm) | | -30 dBm | | | P | |
| CARRIER 1: | max. power | 31.56 nW | (-45.01 dBm) | | -30 dBm | | | P | |
| CARRIER 2: | max. power | 53.11 nW | (-42.75 dBm) | | -30 dBm | | | P | |
| CARRIER 3: | max. power | 183.45 nW | (-37.36 dBm) | | -24 dBm | | | P | |
| CARRIER 4: | max. power | 965.37 nW | (-30.15 dBm) | | -14 dBm | | | P | |
| CARRIER 5: | max. power | 70.98 uW | (-11.49 dBm) | | -6 dBm | | | P | |
| CARRIER 6: | max. power | 75.69 mW | (18.79 dBm) | | --- | | | P | |
| CARRIER 7: | max. power | 29.18 uW | (-15.35 dBm) | | -6 dBm | | | P | |
| CARRIER 8: | max. power | 764.04 nW | (-31.17 dBm) | | -14 dBm | | | P | |
| CARRIER 9: | max. power | 237.27 nW | (-36.25 dBm) | | -24 dBm | | | P | |
| TRAFFIC SLOT: | 8 | | | | | | | | |
| TRAFFIC CARRIER: | 7 | | | | | | | | |
| PACKET TYPE: | P32+Z | | | | | | | | |
| | | measured values | | | | limits | | | |
| CARRIER 0: | max. power | 15.38 nW | (-48.13 dBm) | | -30 dBm | | | P | |
| CARRIER 1: | max. power | 18.32 nW | (-47.37 dBm) | | -30 dBm | | | P | |
| CARRIER 2: | max. power | 28.58 nW | (-45.44 dBm) | | -30 dBm | | | P | |
| CARRIER 3: | max. power | 41.79 nW | (-43.79 dBm) | | -30 dBm | | | P | |
| CARRIER 4: | max. power | 194.49 nW | (-37.11 dBm) | | -24 dBm | | | P | |
| CARRIER 5: | max. power | 385.49 nW | (-34.14 dBm) | | -14 dBm | | | P | |
| CARRIER 6: | max. power | 55.85 uW | (-12.53 dBm) | | -6 dBm | | | P | |
| CARRIER 7: | max. power | 77.03 mW | (18.87 dBm) | | --- | | | P | |
| CARRIER 8: | max. power | 26.89 uW | (-15.70 dBm) | | -6 dBm | | | P | |
| CARRIER 9: | max. power | 703.99 nW | (-31.52 dBm) | | -14 dBm | | | P | |
| TRAFFIC SLOT: | 10 | | | | | | | | |
| TRAFFIC CARRIER: | 8 | | | | | | | | |
| PACKET TYPE: | P32+Z | | | | | | | | |
| | | measured values | | | | limits | | | |
| CARRIER 0: | max. power | 17.69 nW | (-47.52 dBm) | | -30 dBm | | | P | |
| CARRIER 1: | max. power | 15.65 nW | (-48.06 dBm) | | -30 dBm | | | P | |
| CARRIER 2: | max. power | 19.77 nW | (-47.04 dBm) | | -30 dBm | | | P | |
| CARRIER 3: | max. power | 27.59 nW | (-45.59 dBm) | | -30 dBm | | | P | |
| CARRIER 4: | max. power | 56.97 nW | (-42.44 dBm) | | -30 dBm | | | P | |
| CARRIER 5: | max. power | 142.67 nW | (-38.46 dBm) | | -24 dBm | | | P | |
| CARRIER 6: | max. power | 633.66 nW | (-31.98 dBm) | | -14 dBm | | | P | |
| CARRIER 7: | max. power | 49.98 uW | (-13.01 dBm) | | -6 dBm | | | P | |
| CARRIER 8: | max. power | 70.56 mW | (18.49 dBm) | | --- | | | P | |
| CARRIER 9: | max. power | 26.58 uW | (-15.75 dBm) | | -6 dBm | | | P | |

| | | | | | | |
|------------------|------------|-----------------|--------------|---------|--------|---|
| TRAFFIC SLOT: | 8 | | | | | |
| TRAFFIC CARRIER: | 9 | | | | | |
| PACKET TYPE: | P32+Z | | | | | |
| | | measured values | | | limits | |
| CARRIER 0: | max. power | 13.92 nW | (-48.56 dBm) | -30 dBm | | P |
| CARRIER 1: | max. power | 17.49 nW | (-47.57 dBm) | -30 dBm | | P |
| CARRIER 2: | max. power | 16.11 nW | (-47.93 dBm) | -30 dBm | | P |
| CARRIER 3: | max. power | 25.87 nW | (-45.87 dBm) | -30 dBm | | P |
| CARRIER 4: | max. power | 27.75 nW | (-45.57 dBm) | -30 dBm | | P |
| CARRIER 5: | max. power | 54.37 nW | (-42.65 dBm) | -30 dBm | | P |
| CARRIER 6: | max. power | 186.69 nW | (-37.29 dBm) | -24 dBm | | P |
| CARRIER 7: | max. power | 737.70 nW | (-31.32 dBm) | -14 dBm | | P |
| CARRIER 8: | max. power | 66.95 uW | (-11.74 dBm) | -6 dBm | | P |
| CARRIER 9: | max. power | 77.03 mW | (18.87 dBm) | --- | | P |

2.3.11 TC 11 Emissions due to intermodulation (4.5.6.4)

only for basestations with several transmitters

2.3.12 TC 12 Spurious emissions when allocated a transmit channel (4.5.6.5)

Channel 5, radiated

| | | | |
|---|----------------------|-------------------------|---|
| 30 MHz - 1 GHz | aimed \leq -36 dBm | actual \leq -48.70dBm | P |
| 1 GHz - 4 GHz | aimed \leq -30 dBm | actual \leq -43.67dBm | P |
| Peak at 3.777 GHz hor. | aimed \leq -30 dBm | actual \leq -31.39dBm | P |
| broadcast bands according to TBR 6 | aimed \leq -47 dBm | actual \leq -47.90dBm | P |
| Measurement uncertainty $f < 1\text{GHz}$: | + 2.89 dB / -2.98 dB | | |
| $f > 1\text{GHz}$: | + 3.40 dB / -3.75 dB | | |

Channel 5, conducted

| | | | |
|---|----------------------|--------------|---|
| TRAFFIC SLOT: | 2 | | |
| TRAFFIC CARRIER: | 5 | | |
| PACKET TYPE: | P32+Z | | |
| Wideband Measurements | | | |
| Range from | 300kHz to | 12750.00 MHz | P |
| Measurement uncertainty $f > 1\text{GHz}$: | + 1.40 dB / -1.75 dB | | |

2.3.13 TC 13 Radio receiver sensitivity (4.5.7.1)

At a level of -83 dBm the BER shall be $\leq 10^{-3}$.
Measurement uncertainty: + 0.25 dB / -0.27 dB

| | | | | |
|--------------------------|---------------|------------|----------|---|
| TRAFFIC SLOT: | 8 | | | |
| TRAFFIC CARRIER: | 0 | | | |
| PACKET TYPE: | P32+Z | | | |
| Center frequency offset: | 0 kHz | | | |
| BER: 0.00000000 | FER: 0.000000 | evaluated: | 320 kbit | P |
| Center frequency offset: | 50 kHz | | | |
| BER: 0.00000000 | FER: 0.000000 | evaluated: | 320 kbit | P |
| Center frequency offset: | -50 kHz | | | |
| BER: 0.00000000 | FER: 0.000000 | evaluated: | 320 kbit | P |
| TRAFFIC SLOT: | 0 | | | |
| TRAFFIC CARRIER: | 5 | | | |
| PACKET TYPE: | P32+Z | | | |
| Center frequency offset: | 0 kHz | | | |
| BER: 0.00000000 | FER: 0.000000 | evaluated: | 320 kbit | P |
| Center frequency offset: | 50 kHz | | | |
| BER: 0.00000000 | FER: 0.000000 | evaluated: | 320 kbit | P |
| Center frequency offset: | -50 kHz | | | |
| BER: 0.00000000 | FER: 0.000000 | evaluated: | 320 kbit | P |
| TRAFFIC SLOT: | 4 | | | |
| TRAFFIC CARRIER: | 9 | | | |
| PACKET TYPE: | P32+Z | | | |
| Center frequency offset: | 0 kHz | | | |
| BER: 0.00000000 | FER: 0.020000 | evaluated: | 320 kbit | P |
| Center frequency offset: | 50 kHz | | | |
| BER: 0.00000000 | FER: 0.020000 | evaluated: | 320 kbit | P |
| Center frequency offset: | -50 kHz | | | |
| BER: 0.00000000 | FER: 0.020000 | evaluated: | 320 kbit | P |

2.3.14 TC 14 Radio receiver reference bit error ratio (4.5.7.2)

At a level of -73 dBm the BER shall be $\leq 10^{-5}$, the FER shall be $\leq 5 \cdot 10^{-4}$.
Measurement uncertainty: + 0.25 dB / -0.27 dB

| | | | | |
|------------------|---------------|------------|-------------|---|
| TRAFFIC SLOT: | 2 | | | |
| TRAFFIC CARRIER: | 0 | | | |
| PACKET TYPE: | P32+Z | | | |
| BER: 0.00000000 | FER: 0.000000 | evaluated: | 32.000 Mbit | P |
| TRAFFIC SLOT: | 6 | | | |
| TRAFFIC CARRIER: | 5 | | | |
| PACKET TYPE: | P32+Z | | | |
| BER: 0.00000000 | FER: 0.000000 | evaluated: | 32.000 Mbit | P |
| TRAFFIC SLOT: | 10 | | | |
| TRAFFIC CARRIER: | 9 | | | |
| PACKET TYPE: | P32+Z | | | |
| BER: 0.00000000 | FER: 0.000000 | evaluated: | 32.000 Mbit | P |

2.3.15 TC 15 Radio receiver interference performance (4.5.7.3)

The BER shall be $\leq 10^{-3}$.

Measurement uncertainty: + 0.32 dB / -0.34 dB

TRAFFIC SLOT: 8
 TRAFFIC CARRIER: 0
 PACKET TYPE: P32+Z
 BER: FER: kBit: intf.car: lev in dBm:
 0.000000 0.000000 320 -3 -33.0
 0.000000 0.000000 320 -2 -39.0
 0.000000 0.000000 320 -1 -60.0
 0.000009 0.000000 338 0 -83.0
 0.000000 0.000000 320 1 -60.0
 0.000000 0.000000 320 2 -39.0
 0.000000 0.000000 320 3 -33.0
 0.000000 0.000000 320 4 -33.0
 0.000000 0.000000 320 5 -33.0
 0.000000 0.000000 320 6 -33.0
 0.000000 0.000000 320 7 -33.0
 0.000000 0.000000 320 8 -33.0
 0.000000 0.000000 320 9 -33.0
 0.000000 0.000000 320 10 -33.0
 0.000000 0.000000 320 11 -33.0
 0.000000 0.000000 320 12 -33.0

TRAFFIC SLOT: 0
 TRAFFIC CARRIER: 5
 PACKET TYPE: P32+Z
 BER: FER: kBit: intf.car: lev in dBm:
 0.000000 0.000000 320 -3 -33.0
 0.000000 0.000000 320 -2 -33.0
 0.000000 0.000000 320 -1 -33.0
 0.000000 0.000000 320 0 -33.0
 0.000000 0.000000 320 1 -33.0
 0.000000 0.000000 320 2 -33.0
 0.000000 0.000000 320 3 -39.0
 0.000000 0.000000 320 4 -60.0
 0.000017 0.000000 351 5 -83.0
 0.000000 0.000000 320 6 -60.0
 0.000000 0.000000 320 7 -39.0
 0.000000 0.000000 320 8 -33.0
 0.000000 0.000000 320 9 -33.0
 0.000000 0.000000 320 10 -33.0
 0.000000 0.000000 320 11 -33.0
 0.000000 0.000000 320 12 -33.0

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[illegible]

2.3.16 TC 16 Radio receiver blocking, case 1 (4.5.7.4)

The BER shall be $\leq 10^{-3}$.

Measurement uncertainty: + 0.81 dB / -0.96 dB conducted

Measurement uncertainty: + 3.00 dB / -3.00 dB radiated

P

P

P

2.3.17 TC 17 Radio receiver blocking, case 2 (4.5.7.5)

The BER shall be $\leq 10^{-3}$.

Measurement uncertainty: + 0.63 dB / -0.71 dB

TRAFFIC SLOT: 8
TRAFFIC CARRIER: 0
PACKET TYPE: P32+Z
BER: 0.00000000 FER: 0.020000 evaluated: 320 kbit

P

TRAFFIC SLOT: 6
TRAFFIC CARRIER: 5
PACKET TYPE: P32+Z
BER: 0.00000000 FER: 0.020000 evaluated: 320 kbit

P

TRAFFIC SLOT: 4
TRAFFIC CARRIER: 9
PACKET TYPE: P32+Z
BER: 0.00000000 FER: 0.010000 evaluated: 320 kbit

P

2.3.18 TC 18 Receiver intermodulation performance (4.5.7.6)

The BER shall be $\leq 10^{-3}$.

Measurement uncertainty: + 0.40 dB / -0.43 dB

TRAFFIC SLOT: 8
TRAFFIC CARRIER: 0
PACKET TYPE: P32+Z
M: 0 A: 2 B: 4
BER: 0.000000 FER: 0.0000 eval.data: 320 kbit

P

M: 0 A: -2 B: -4
BER: 0.000000 FER: 0.0000 eval.data: 320 kbit

P

TRAFFIC SLOT: 0
TRAFFIC CARRIER: 5
PACKET TYPE: P32+Z
M: 5 A: 7 B: 9
BER: 0.000000 FER: 0.0000 eval.data: 320 kbit
M: 5 A: 3 B: 1
BER: 0.000000 FER: 0.0000 eval.data: 320 kbit

P

P

TRAFFIC SLOT: 4
TRAFFIC CARRIER: 9
PACKET TYPE: P32+Z
M: 9 A: 11 B: 13
BER: 0.000000 FER: 0.0000 eval.data: 320 kbit
M: 9 A: 7 B: 5
BER: 0.000000 FER: 0.0000 eval.data: 320 kbit

P

P

- 2.3.19 TC 19 Spurious emissions when the radio endpoint has no allocated transmit ch. (4.5.7.7)**
only recommended for portable parts
- 2.3.20 TC 20 Synchronisation port (4.5.8)**
No test
- 2.3.21 TC 21 Equipment identity verification (4.5.9)**
Statement of the applicant“
- 2.3.22 TC 22 Efficient use of radio spectrum (4.5.10)**
Statement of the applicant“
- 2.3.23 TC23 WRS (4.5.11)**
No test
- 2.3.24 TC24 PP to PP communication (4.5.12)**
No test
- 2.3.25 TC25 Direct communication (4.5.13)**
No test
- 2.3.26 TC26 Higher level modulation (4.5.14)**
No test

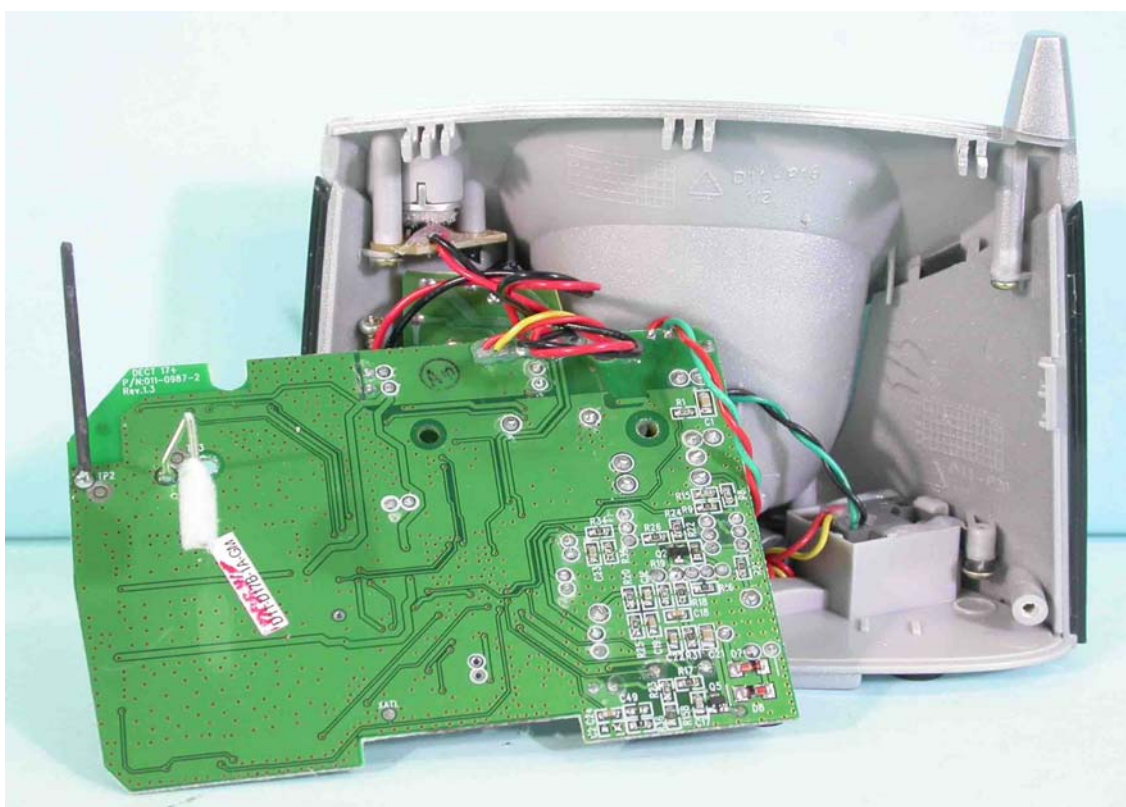
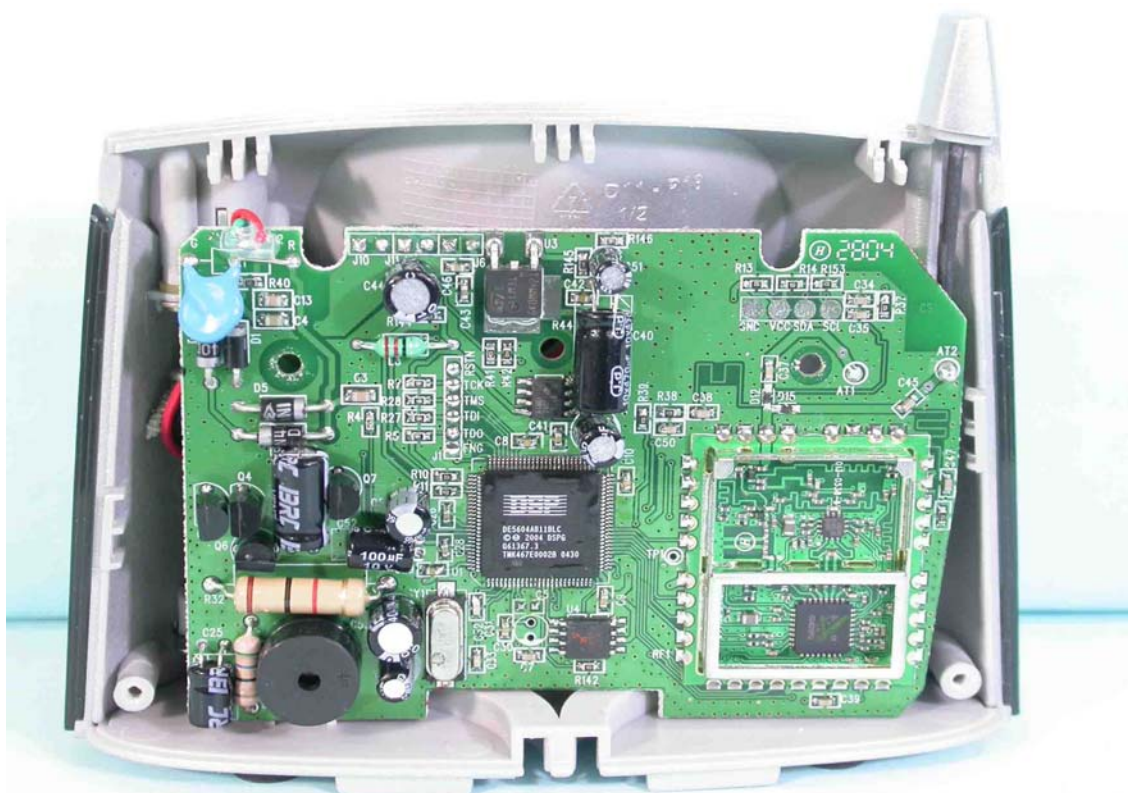
4 Appendix Photo of the Test Candidate (exterior)



Photo of the Test Candidate (exterior)



Photo of the Test Candidate (interior)



MANUFACTURER DECLARATION

SunCorp Communications Limited

Room 1907-08, Harcourt House, 39 Gloucester Road, Wanchai, Hong Kong

(Name / Address)

declare for the Digital Enhanced Cordless Telecommunications (DECT) telephone system specified as

DECT17-3-S11

(Model Number)

For the portable radio termination (PT):

The first PT transmission on the newly selected channel is made in accordance with the scan sequence of the addressed RFP.

To continue transmitting on the newly selected physical channel the PT transmissions within 2 frames of the first PT transmission.

For the fixed radio termination (FT):

The RFP do not transmit on more than 2 physical channels for which complementary physical channels do not exist.

A complementary physical channel is a physical channel between the same two radio endpoints which occurs 5 ms before or after the physical channel to which is complementary.

When an FT is addressing a specific PT then the first FT transmission is made in accordance with the scan sequence of the addressed PT receiver.

To continue transmitting on the selected physical channel the FT receives an indication that the PT is receiving the FT transmissions within 2 frames of the first FT transmission.

For the channel release:

A REP cease transmission on all physical channels if it has not received a valid indication of the other radio endpoint's identity within 10 seconds of the receipt of the last indication.

A REP which transmits on both the physical channel and complementary physical channel cease to transmit on the channels if either:



The receiving endpoint indicate to the transmitting endpoint that transmission cease on both these physical channels; or



The transmitting FT or PT is no longer attempting to receive at least one physical channel from the FT or PT to which it is transmitting.

In General:

No more than two physical channels based on the half slot format are sent within the same frame to the same REP;

The EUT is capable of communicating on all 10 DECT RF channels

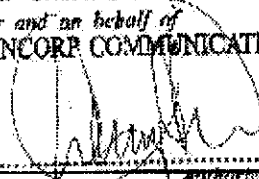
August 6th, 2004

(Date)

CW Cheung

(Printed full name)

For and on behalf of
SUNCORP COMMUNICATIONS LIMITED



Authorized Signature(s)

(Authorized signature and company chop)

MANUFACTURER DECLARATION

SunCorp Communications Limited

Room 1907-08, Harcourt House, 39 Gloucester Road, Wanchai, Hong Kong

(Name / Address)

declares for the Digital Enhanced Cordless Telecommunications (DECT) telephone system specified as

DECT17-3-S11

(Model Number)

The Portable Part (PP):

It is not possible for the user to alter the IPEI using any normally accessible procedure. We supply, in addition to the equipment, sufficient means in the equipment with instructions in the documentation to permit validation of the Equipment Manufacturer's Code and verification of the existence of the Portable equipment Serial Number (PSN) code in the equipment.

The Fixed Part (FP):

DECT FPs which do not transmit the TA escape message transmits the Nr message as defined in EN 300 175-3 [3] at least once every 10 seconds on all active physical channels; These Nr identity messages are transmitted with the appropriate A-field header code as defined in EN 300 175-3[3] and the Nr message contains an ETSI distributed code as defined in EN 300 175-6[6].

August 6th, 2004

(Date)

CW Cheung

(Printed full Name)

For and on behalf of
SUNCORP COMMUNICATIONS LIMITED



Authorized Signature(s)

(Authorized Signature & Company Chop)